

## BOYS WRITE ESSAYS ON AUTO'S REAR AXLE

Contest Conducted by Studebaker Company Shows Lads Have Accurate Knowledge.

The rear axle, next to the motor itself, is the most vital part of a motor car, yet it seems to be least understood, or the hardest to comprehend. It was this fact that prompted the Studebaker Corporation to institute a prize essay contest among boys not over seventeen years of age for the best article not exceeding 500 words, on the construction of the full floating rear axle, as used in Studebaker motor cars, and the advantages it possesses over other types of axles. The essay contest was of a national character, and brought several thousand articles discussing the full floating rear axle, coming from almost every part of the country.

Not only do the essays show a great deal of familiarity on the part of young America with automobile construction, but they developed the fact that the young writers possess a creditable mechanical knowledge. Many of them entered into a detailed description, showing how a full floating rear axle relieves the shaft of the burden of the car's weight, at the same time affording greater accessibility to the parts having directly to do with the rear axle and increasing the efficiency in the car's performance.

The prizes offered in the competition totaled \$100. The judges have announced the awards as follows: First, \$50, Philadelphia, 150; Ralph S. Saunders, fifteen, Springfield, Mass., \$25; Paul E. Griffith, sixteen, Milliken, Col., \$10. Fifteen boys receiving \$1 each were: Ivan Miller, Versailles, Ohio; Clyde Walker, Ord, Neb.; Edward Dillon, Carney, Neb.; Charles Barlow, Dillon, S. C.; Stanley A. Sprinkle, Kalamazoo; John Hurford, Swanton, Okla.; Lloyd E. Hunt, Grand Rapids, Mo.; Alfred E. Frazier, Seattle; Delmar Hasegraff, Hermann, Mo.; Godfrey Spelt, South Pasadena, Calif.; Floyd S. Prothero, Ludlow, Ky.; William Williamson, West New Brighton, N. Y.; Lee R. Thompson, Iowa; Okla.; Arthur B. Guest, Wilmington, Del.

## Frank Lynching Brings Georgia Prison Shake-up

ATLANTA, Ga., Oct. 23.—A shake-up of the entire prison force at the Milledgeville penitentiary as a result of the kidnapping and lynching of Leo Frank is in prospect. Five guards and deputy wardens on duty when Frank was kidnapped have been discharged, and one deputy was allowed to resign. Further changes are expected.

Warden Burns, who professed to have been asleep on the prison porch when Frank was taken by the posse, may not remain in charge after the publication of the result of the investigation by the State prison commission.

## Slang Fables of MOTORDOM

• THE OTHER ANGLE HICK COP. •

By MONTE W. SOHN.

Once upon a time in a town of 750 inhabitants there was a Justice of the Peace. The first part of the last was a Misnomer, because, while he sat in with Monotonous Regularity, he never dealt it. He thought it was a Joker and didn't belong in the Deck.

This Snifter had a personal Grudge against Self-Propelled Vehicles, which Manifested itself somewhat selfishly. He used to Swear in a Couple of Hickeys who were Too Hefty to Toll or Spin and go out on the Public Highway in the Establishment of Speed Traps for Unsuspecting Motorists.

Now the Public Highway in the vicinity of this Burg was Afflicted with just One Virtue. It was Appropriately Named for the Purposes of this Body-Snatching Cripple Hopper. It wasn't possible to Travel more than 12 M. P. H. on this Highway with a 2-Cylinder B.H.G. having all Cylinders Cylindrical and the SNIVELS and FLYING PRIFZES gave it the Merry Haha at the Crossroads just outside of Slantville Seven Miles away. But the J. P. had no difficulty Copping off a Couple of Uninitiated Motorists every Hour—charged with Violating a Speed Limit of Twenty-Five.

It was a Sweet Graft. Business Got so Good that the J. P. began to Flirt with the Old Johannes Place, which had Running Water and Everything in the House.

In the Early Spring when the Freshets Ramped around, he had to be Satisfied with Soaking the Village Doctor and the Underfaker—both of whom had Gas Buses. In the Fall there was always a Crop of Motor Truck Straw Riders which would Yield Ten Per Cent for Not Carrying Passenger Licenses.

He used to Play it Safe, however. The Too Healthy Hickeys he Swore in as Deputies used to Keep a large Hunk of Timber in the Office this side of the Bend. As soon as the Revenue Hove To, they would Flip the Timber across the Highway and the J. P. would unleash his Convolving Argument—a New Model, 20 Gauge Remington. Appreciating the Fact that he was a Traffic Cop, they usually Came Across.

The J. P. was Enjoying Life. He Enjoyed it so much that he began to Hold night sessions as well. It was Justice, he said, and it Must be Handled Out. Being a Wise Bird, he Played it for All It Was Worth, because sooner or later he knew he'd have to go to Work.

One Saturday during the Summer just Summed, Justice Plunge acted like he'd lost his Best Friend. It rained All Day. It didn't Leak. It Slopped.

The Highway was Inundated, but that Night when the Moon Came Up, the J. P. got his Hickeys and Emulated Noah, Flooding his Stock when it

Seemed, the Entire World, was in Liquidation.

They Waited.

About Ten Fifteen the Blurb of a High Powered Bus Could be Heard just around the Bend. At Ten Fifteen and Four-fifths the Unquartered Oak did a Kelly across the Pike, and the J. P. swung his Red Lantern. The H. P. Bus Pelted to a Stop and Came to a Crop Seven Feet from the Guillotine.

A Mild Mannered Liasie stepped gracefully into the Mud and Inquired: "The J. P. Gleeed. 'For Exceedin' the Speed Limit—' and he 'Cut the Con, because Just at that Moment the Moon Paled into insignificance beside her More Brilliant Sisters and Somebody Spilled a Million Gallons of Ink over the J. P.'s Sensibilities."

Nine Weeks Later the J. P. got his Other Foot out and Opened One Peepers. The Nurse in the Hospital Nailed his Gab for an Easy Play Unassisted and he was Forced. So he Closed it again.

Ten Days Later the J. P. got a Backrest, a Soft Boiled Egg and a Copy of the SLANTVILLE SNEEZER.

On Passy One, before he did his Thankful, he Lamped the Following:

POLICE HAVE NEW CLEW  
Bandits Who Committed Slantville Out-  
rage May Be Caught Any Day  
Now, Says Chief Boob.

The Lawless Thugs who robbed the National Bank of Slantville of \$12,250 are under the watchful eye of the law at last. Chief Boob at a late hour last night said that it was only a question of hours now before the desperadoes are apprehended.

Questioned about the progress of the Slantville Police Force, Chief Boob assured the reporter for the Sneezers that he has a new clue which has important bearing on the case.

Slantvillians may rest easy now, says Chief Boob. More power to Chief Boob and we. We Wish there were more like him.

Justice of the Peace Jones of Hoga Eden, who was murderously assaulted by the bandits in a noble attempt to apprehend them singlehanded is recovering rapidly, which all Slantvillians will be glad to hear of.

The J. P. sniled the Soft Boiled Unbathed all over his Nightie and Pined his Adam's Apple Back into his Throat. Then he sighed in Relief and went to Sleep.

If you ever Amble over to Hoga Cornaga you'll find it Macadam from A to Zeke, and if you want to get some Swell Light Chestnuts or a Marriage License, just ask for Mr. Jones.

Moral: Every Canine gets his Twenty-four.

## STRESS IS PLACED ON SLEEVE VALVE

Advantages Claimed for the  
Stearns-Knight Pointed Out  
in Short History.

By ARTHUR FORAKER.

Seven years ago the English Daimler Company, of Coventry, England, announced to the world that after exacting tests, carried on for more than a year, it had adopted the Knight sleeve valve principle in all its motors.

Soon after this Mercedes, of Germany; Minerva, of Belgium, and Panhard, of France, also adopted the Knight principle. Each of these four companies at the time the knight motor was adopted was the leading automobile builder in its own country. These companies had highly developed and perfected their own poppet-valve motors and, therefore, were loath to admit the superiority of the Knight principle, and it was only after the most grueling tests that they decided to abandon their own motors and adopt the sleeve valve type.

Sliding Valves Used.  
The advantages of the sleeve valve motors are definite, indisputable. Instead of clashing poppet-valves, raised by blows from steel cams and seated by strong springs, it has sliding valves—cylindrically shaped sleeves, which glide silently up and down in a film of oil. Certain ports in these sleeves register with each other and with the cylinder ports at proper intervals, forming large and direct passages for intake and exhaust gases.

Unlike the valves of poppet-valve motors, these sleeve valves do not operate against strong springs and pressure of gas in the cylinders. The sleeves are not fitted tightly, their surfaces are always covered with a film of oil, and their whole travel is about one and one-half inch at half the speed of the motor. The friction resistance is negligible.

Advantages Claimed.  
It is these sleeve valves which give the Knight type motor these important advantages:

It improves with use. Better than any poppet-valve motor to begin with, continued use serves only to polish its sliding surfaces and make it even more smooth running, more powerful, more efficient. All other motors deteriorate with use.

It is more powerful—a four-cylinder Knight motor delivers more power than a six-cylinder poppet-valve motor having the same space for gas. The valve action is positive; the gas passages are large and direct; the combustion chamber of the ideal spherical shape; the point of ignition directly above the center of the piston. Because the valve action is positive and does not depend on the uncertain operation of springs, power increases with the speed of the motor. Poppet-valves do not operate

with precision at high speed, causing loss in compression and falling off in power.

Needs No Adjustments.

It requires no adjustments—and most automobile repair work is on motors. The valve timing is positive, and most always remains so. There is no grinding of valves with consequent adjustments; no weakening of springs to require retensioning. There are no valve stems to break; no clashing parts to cause rapid wear. Because of the complete combustion and thorough exhaust but very little carbon forms and that little is beneficial. Poppet-valve motors require frequent grinding and adjustment of valves and cleaning of carbon.

It is more flexible—as flexible as any six-cylinder poppet-valve motor. Uniform compression in all cylinders, and at all speeds, makes it possible to throttle down to a walking pace on high gear. Gear shifting is reduced to a minimum.

It is quiet in operation—and stays so. Its valves slide, like those of a steam engine. There is no pounding of valves and cams as in mechanical poppet-valve motors. It has fewer parts than a poppet-valve motor, and those parts are mechanically correct. Engineers never use springs and cams as an important part of any mechanism except as a last resort. It is almost a paradox that the Knight type of motor, which requires so little cleaning, should be the most accessible for cleaning.

It is economical. Because it utilizes all the energy of the gas, without waste, less gasoline is required for a given amount of power. It gives from 10 to 15 per cent more mileage on gasoline. And because the flow of oil is automatically regulated by the power requirements of the motor, and is so perfectly distributed, the Knight type uses but one-third to one-half as much oil for a given mileage.

## Truck Operators Save By Oversizing of Tires

Truck operators who find that by over-sizing their tires they can get increased service will be interested in the following statement:

"The extra high tread of our De Luxe Wireless Tire," states Dickson, of the local Goodrich branch, "increases the carrying capacity of the tire about 500 pounds over the capacity of a regular tire of equal width."

"For example, a truck operator using six inch tires, singles or duals, of the regular shape, can apply six inch De Luxe tires to his rims without rebuilding his wheels. The same holds true with seven inch tires."

"This saves considerable expense. It also adds immensely to the resiliency. A seven inch regular tire is no higher than a six inch regular, consequently is no more resilient. A six inch De Luxe tread is 44 per cent higher than a six inch regular, and as a consequence, far more resilient than the regular tire."

"This added resiliency reduces the jar on the mechanism, prolongs truck life, and lowers maintenance costs."

**Stoical.**  
"Quite recently our bishop went over each ward. In spite of this suffering the men seemed to be in the best of spirits."—Hersham (Eng.) Parish Magazine.

**New Teacher Named.**  
To meet the increased demand at the McLean, Va., school, a new teacher has been appointed. She is Miss Ada Richardson, graduate of the Women's Normal School of Richmond. From thirty-nine pupils last year the enrollment has jumped to eighty-three.

**The Record of  
The Record Auto Supply Co.**

1,500 Satisfied  
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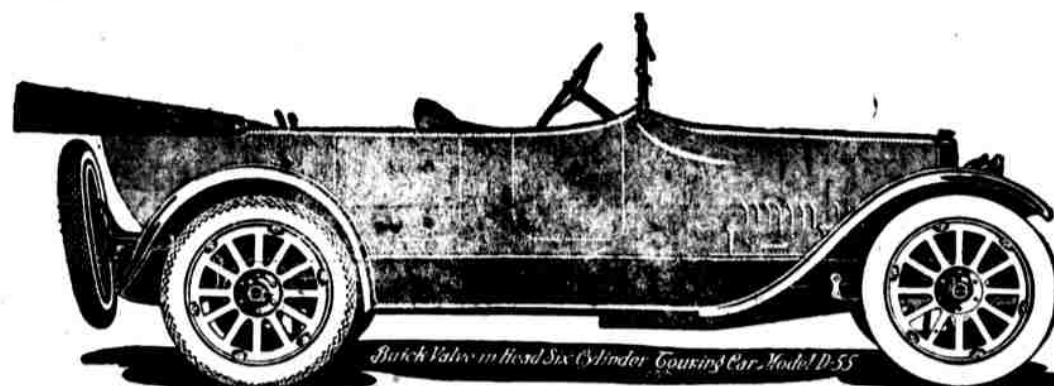
**FIRST**

# Buick

—Delco Equipped

## The Long Service Six

No Buick owner thinks 75,000 miles an unusual record. At the 100,000 mark he considers that his Buick is doing well. But he doesn't rank it with the veterans until it has done its 125,000 miles and is still going easily, quietly.



**\$1525** Delivered Here

BUICK BUILDERS have incorporated in the construction of the 1916 models every possible refinement. Features in comfort and convenience prevail in its equipment.

But more important, they have built into the new Buicks the Buick Valve-in-Head Motor; the chassis is so proportioned as to make for long life of the car. Wherever strength could be added, wherever more ruggedness would enhance its riding qualities or its durability it was done. That, in short, is Buick accomplishment.

## Buick Motor Company

Washington Branch—Connecticut Avenue at L Street



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**\$1375**

Through the most exacting tests of Time the Auburn has conclusively established its worth. Car calibre is not determined by the claims of advertising announcements. Auburn owners—its greatest testimonial—are unanimous in their praise of its merits.

It is striking in its attractiveness and replete with every desirable modern equipment.

It is built not merely for today, the Auburn is a car for many years of service. Sixteen years of successful experience are back of it.

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